

MEMO

To: Bonnie Lavelle
From: Bill Brattin
Date: 4/10/01
Subj: In Vitro Bioaccessability of Lead in VBI70 Soils

As was discussed in the technical group meeting yesterday, the in vitro bioaccessability of lead has been measured for the two VBI70 soils that were tested in the in vivo swine study. The results are summarized below:

Test Material	In Vitro Bioaccessability (%)	In Vivo Relative Bioavailability (%)
Eastern ID# 3-15621-f	86.3%	87%
Western ID# 3-15628-f	86.3%, 83.1%*	81%

* Duplicate analysis

As seen, the results observed from the in vitro testing closely match those observed using juvenile swine.

In addition, today I discussed with John Drexler whether it is unexpected that the RBA should be relatively high for lead that is predominantly "lead phosphate". As I speculated at the meeting, not all lead phosphates are equal. John indicated that the lead phosphate particles at VBI70 are very small (tending to increase their RBA), and are also likely to be mainly amorphous rather than crystalline (also tending to increase their RBA). He also cautioned against drawing strong conclusions regarding the RBA of lead phosphate from the soil amendment studies (as discussed by Joyce), identifying a number of reasons why it may be premature to generalize from the studies performed to date.